

**REMARKS**

**Objection to the Specification**

In the June 21, 2005 Office Action, the Examiner objected to the format of the application as filed under 37 C.F.R. §1.77(b), alleging that a “Brief Summary of the Invention” was improperly placed in the “Detailed Description” section. Applicants respectfully disagree with the Examiner and note that an invention summary is not required under 37 C.F.R. §1.77(b). However, to expedite prosecution, Applicants have moved originally filed paragraphs 18-23 below a new “Summary of the Invention” heading that has been amended into the specification. Applicants respectfully submit that no new matter has been introduced by this minor amendment and believe the Examiner’s objection to be obviated.

**Claim Rejections**

Claims 1-30 are pending. Claim 1 has been amended. No new matter has been introduced. Reexamination and reconsideration of this application are respectfully requested.

Claims 8-10, 12, 13, 15-17, and 21-29 were rejected under 35 U.S.C. §112, ¶2, as being indefinite. Claims 1-17 were rejected under 35 U.S.C. §101 as being directed to non-statutory subject matter. Claims 1-7, 11, 14, 18-20, and 30 were rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,453,209 to Hill et al. (“Hill”). These rejections are respectfully traversed.

**§112, ¶2 Rejection**

The Examiner rejected claims 8-10, 12, 13, 15-17, and 21-29 under 35 U.S.C. §112, ¶2, as being indefinite. Specifically, the Examiner alleged that (a) claims 8, 9, 10, 12, and 27-29 are directed to “a structured product coding system node that is part of a hierarchical or assembly/disassembly tree;” (b) claims 13-15, and 21-26 are directed to the “prediction of cost of the given product;” (c) claims 16 and 17 are directed to the “de-fabrication procedure and the facilitation of inventory control;” and (d) the above-listed claims all “lack proper and sufficient nexus between the claimed limitations with that of the limitations of the related independent claims 1 and 18.”

Applicants disagree with the Examiner’s allegations. For example, Applicants note that all of claims 8-10, 12, 13, 15-17, and 21-29 contain proper antecedent basis and

limitations that narrow the scope of the claims from which they depend. To illustrate this point using claim 8, Applicants note that claim 8 recites (with emphasis added):

8.       The method of claim 1 wherein *using the coded component identifiers and the coded component manipulator identifiers and the coded part-mating operation identifier to represent the identified initial discrete parsed combination as a particular corresponding structured product coding system entry* includes using the coded component identifiers, the coded part-mating operation identifier and the coded component manipulator identifiers to specify a structured product coding system node.

Applicants submit that the limitation shown in italics above (beginning with “using the coded component identifiers and...””) has support in originally filed independent claim 1. The remaining limitations of claim 8 (beginning with “includes using the coded component identifiers, the coded ...”) further limit the scope of the first limitation recited in claim 8, as discussed above. Accordingly, Applicants believe claim 8 to contain a proper nexus between the limitations introduced in claim 8 and the limitations of independent claim 1. Applicants further submit that claims (a) 9, 10, 12, 13, and 15-17, and (b) 21-29, also contain a proper nexus between their claim limitations and the limitations of independent claims 1 and 18, respectively. Accordingly, Applicants respectfully submit that the limited requirements of 35 U.S. C. §112, ¶2 are met and that the rejection of claims 8-10, 12, 13, 15-17, and 21-29 under 35 U.S.C. §112, ¶2 should be withdrawn.

#### §101 Rejection

Claims 1-17 were rejected under 35 U.S.C. §101 as being directed to non-statutory subject matter. Specifically, the Examiner alleged that these claims “feature limitations that are abstract and are not limited to a practical application or use of the abstract ideas.” Although the Applicants respectfully disagree with the Examiner’s contention, independent claim 1 has been amended as follows (the amended language is shown in bold):

1.       A method comprising:
  - coding a plurality of individual product components using at least corresponding coded component identifiers;
  - coding a plurality of component manipulators using at least corresponding coded component manipulator identifiers;
  - coding a plurality of part-mating operations for at least one of assembly and disassembly as corresponds to at least some of the plurality of individual product components and the plurality of component manipulators;

- forming, **in a manufacturing analysis platform**, a structured product coding system for a given product by ...

Applicants submit that the amended limitation specifies that the structured product coding system is formed in a manufacturing analysis platform. Accordingly, Applicants submit that the Examiner's 35 U.S.C. §101 rejection of claims 1-17 is traversed, and this rejection should therefore be withdrawn.

§102(a) Rejection

Claims 1-7, 11, 14, 18-20, and 30 were rejected under 35 U.S.C. §102(e) as being anticipated by Hill. Specifically, the Examiner alleged that Hill teaches (a) a computer-implemented method and system for manufacturing vehicles, (b) a database for storing vehicle design data, and (c) a process sheet data structure to interrelate tool, part, machine device, etc., information so as to generate a data sheet indicating the assembly process of the vehicle.

Applicants respectfully disagree with the Examiner's allegations and this characterization of Hill. Applicants particularly note that the Examiner has failed to point out any specific passages within Hill that disclose various portions of what is claimed in the rejected claims. With respect to claims 1-7, 11, and 14, for example, Hill does not disclose, and the Examiner has failed to refer to any passages in Hill disclosing, the claimed coding of pluralities of (a) individual product components, (b) component manipulators, or (c) part-mating operations for at least one of assembly and disassembly as corresponds to at least some of the plurality of individual product components and the plurality of component manipulators. Moreover, Hill also fails to disclose the claimed forming, in a manufacturing analysis platform, of a structured product coding system for a given product by any of the following "identifying" limitations set forth in claim 1:

- identifying the components to be used to fabricate the given product;
- identifying part-mating operations to be used for manufacturing the given product;
- identifying an initial discrete parsed combination of at least two of the components and their part-mating operation to be effected as corresponds to initiation of fabrication of the given product and further identifying at least one of the component manipulators to be used to make the initial discrete parsed combination and using the coded component identifiers, the coded part-mating operation identifier and the coded component manipulator

identifiers to represent the identified initial discrete parsed combination as a particular corresponding structured product coding system entry;  
- identifying a subsequent discrete parsed combination of at least the initial discrete parsed combination and at least one of the components and one of the coded part-mating operations to be effected as further corresponds to continuation of the fabrication of the given product and further identifying at least one of the component manipulators to be used to make the subsequent discrete parsed combination and using the coded component identifiers and the coded component manipulator identifiers and the coded part-mating operation identifier to represent the identified subsequent discrete parsed combination as another corresponding structured product coding system entry.

Accordingly, Applicants respectfully submit that claims 1-7, 11, and 14 readily distinguish over Hill. Claims 18-20 and 30 contain similar distinguishing limitations directed to the coding of component identifiers, component manipulators, and part-mating operation identifiers. Moreover, claims 18-20, and 30 also present the following distinguishing limitations (either directly or through claim dependencies) directed to a product coding system that is neither disclosed nor suggested by Hill (with emphasis added):

18. A manufacturing analysis apparatus comprising:
  - a memory containing:
    - coded component identifiers ...;
    - coded component manipulator identifiers ...;
    - coded part-mating operation identifiers ...;
    - *a structured product coding system for at least one given product, which structured product coding system comprises uniquely identified and coded nodes that are at least partially based upon the coded component identifiers, the coded part-mating operation identifiers and the coded component manipulator identifiers, wherein at least some of the coded nodes correspond to discrete manufacturing combinations of product components and at least one of the component manipulators as is used to effect the manufacturing combination.*

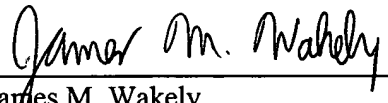
Accordingly claims 18-20 and 30 also distinguish over Hill. Therefore, for at least the reasons set forth above, Applicants respectfully submit that the rejection of claims 1-7, 11, 14, 18-20, and 30 under 35 U.S.C. §102(e) should be withdrawn.

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Applicants believe that the foregoing amendments place the application in condition for allowance, and a favorable action is respectfully requested. If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at the Chicago telephone number (312) 577-7000 to discuss the steps necessary for placing the application in condition for allowance should the Examiner believe that such a telephone conference would advance prosecution of the application.

Respectfully submitted,

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